

User's Manual (detailed) Operating Guide – Technical

Example of PC signal

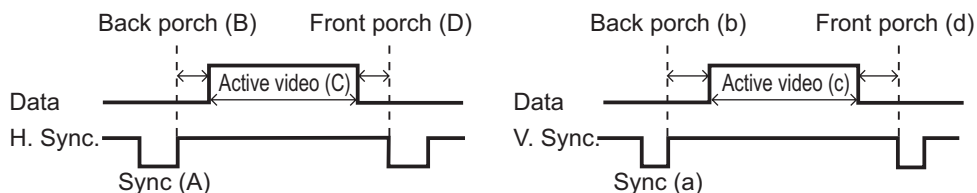
| Resolution (H x V) | H. frequency (kHz) | V. frequency (Hz) | Rating | Signal mode |
|--------------------|--------------------|-------------------|--------|-------------------|
| 720 x 400 | 37.9 | 85.0 | VESA | TEXT |
| 640 x 480 | 31.5 | 59.9 | VESA | VGA (60Hz) |
| 640 x 480 | 37.9 | 72.8 | VESA | VGA (72Hz) |
| 640 x 480 | 37.5 | 75.0 | VESA | VGA (75Hz) |
| 640 x 480 | 43.3 | 85.0 | VESA | VGA (85Hz) |
| 800 x 600 | 35.2 | 56.3 | VESA | SVGA (56Hz) |
| 800 x 600 | 37.9 | 60.3 | VESA | SVGA (60Hz) |
| 800 x 600 | 48.1 | 72.2 | VESA | SVGA (72Hz) |
| 800 x 600 | 46.9 | 75.0 | VESA | SVGA (75Hz) |
| 800 x 600 | 53.7 | 85.1 | VESA | SVGA (85Hz) |
| 832 x 624 | 49.7 | 74.5 | | Mac 16" mode |
| 1024 x 768 | 48.4 | 60.0 | VESA | XGA (60Hz) |
| 1024 x 768 | 56.5 | 70.1 | VESA | XGA (70Hz) |
| 1024 x 768 | 60.0 | 75.0 | VESA | XGA (75Hz) |
| 1024 x 768 | 68.7 | 85.0 | VESA | XGA (85Hz) |
| 1152 x 864 | 67.5 | 75.0 | VESA | 1152 x 864 (75Hz) |
| 1280 x 768 | 47.7 | 60.0 | VESA | W-XGA (60Hz) |
| 1280 x 800 | 49.7 | 60.0 | VESA | 1280 x 800 (60Hz) |
| 1280 x 960 | 60.0 | 60.0 | VESA | 1280 x 960 (60Hz) |
| 1280 x 1024 | 64.0 | 60.0 | VESA | SXGA (60Hz) |
| 1280 x 1024 | 80.0 | 75.0 | VESA | SXGA (75Hz) |
| *1280 x 1024 | 91.1 | 85.0 | VESA | SXGA (85Hz) |
| 1400 x 1050 | 65.2 | 60.0 | VESA | SXGA+ (60Hz) |
| 1440 x 900 | 55.9 | 59.9 | VESA | WXGA+ (60Hz) |
| *1600 x 1200 | 75.0 | 60.0 | VESA | UXGA (60Hz) |

- NOTE** • Be sure to check jack type, signal level, timing and resolution before connecting this projector to a PC.
- Some PCs may have multiple display screen modes. Use of some of these modes will not be possible with this projector.
 - Depending on the input signal, full-size display may not be possible in some cases. Refer to the number of display pixels above.
 - Although the projector can display signals with resolution up to UXGA (1600x1200), the signal will be converted to the projector's panel resolution before being displayed. The best display performance will be achieved if the resolutions of the input signal and projector panel are identical.
 - Automatic adjustment may not function correctly with some input signals.
 - The image may not be displayed correctly when the input sync signal is a composite sync or a sync on G.
 - The HDMI™ input does not support the signals marked with *.

Initial set signals

Initial set signals

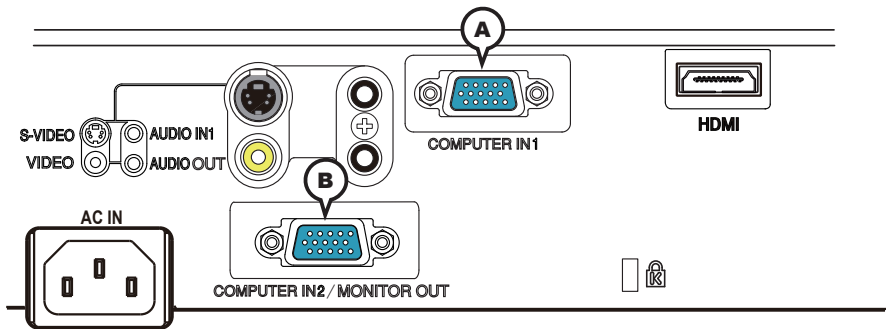
The following signals are used for the initial settings. The signal timing of some PC models may be different. In such case, adjust the items V POSITION and H POSITION in the IMAGE menu.



| Resolution (H x V) | Horizontal signal timing (μs) | | | | Vertical signal timing (lines) | | | | Signal mode |
|-----------------------|-------------------------------|-----|------|-----|--------------------------------|-----|------|-----|-------------------|
| | (A) | (B) | (C) | (D) | (a) | (b) | (c) | (d) | |
| 720 x 400 | 2.0 | 3.0 | 20.3 | 1.0 | 3 | 42 | 400 | 1 | TEXT |
| 640 x 480 | 3.8 | 1.9 | 25.4 | 0.6 | 2 | 33 | 480 | 10 | VGA (60Hz) |
| 640 x 480 | 1.3 | 4.1 | 20.3 | 0.8 | 3 | 28 | 480 | 9 | VGA (72Hz) |
| 640 x 480 | 2.0 | 3.8 | 20.3 | 0.5 | 3 | 16 | 480 | 1 | VGA (75Hz) |
| 640 x 480 | 1.6 | 2.2 | 17.8 | 1.6 | 3 | 25 | 480 | 1 | VGA (85Hz) |
| 800 x 600 | 2.0 | 3.6 | 22.2 | 0.7 | 2 | 22 | 600 | 1 | SVGA (56Hz) |
| 800 x 600 | 3.2 | 2.2 | 20.0 | 1.0 | 4 | 23 | 600 | 1 | SVGA (60Hz) |
| 800 x 600 | 2.4 | 1.3 | 16.0 | 1.1 | 6 | 23 | 600 | 37 | SVGA (72Hz) |
| 800 x 600 | 1.6 | 3.2 | 16.2 | 0.3 | 3 | 21 | 600 | 1 | SVGA (75Hz) |
| 800 x 600 | 1.1 | 2.7 | 14.2 | 0.6 | 3 | 27 | 600 | 1 | SVGA (85Hz) |
| 832 x 624 | 1.1 | 3.9 | 14.5 | 0.6 | 3 | 39 | 624 | 1 | Mac 16" mode |
| 1024 x 768 | 2.1 | 2.5 | 15.8 | 0.4 | 6 | 29 | 768 | 3 | XGA (60Hz) |
| 1024 x 768 | 1.8 | 1.9 | 13.7 | 0.3 | 6 | 29 | 768 | 3 | XGA (70Hz) |
| 1024 x 768 | 1.2 | 2.2 | 13.0 | 0.2 | 3 | 28 | 768 | 1 | XGA (75Hz) |
| 1024 x 768 | 1.0 | 2.2 | 10.8 | 0.5 | 3 | 36 | 768 | 1 | XGA (85Hz) |
| 1152 x 864 | 1.2 | 2.4 | 10.7 | 0.6 | 3 | 32 | 864 | 1 | 1152 x 864 (75Hz) |
| 1280 x 768 | 1.7 | 2.5 | 16.0 | 0.8 | 3 | 23 | 768 | 1 | W-XGA (60Hz) |
| 1280 x 800 | 1.6 | 2.4 | 15.3 | 0.8 | 3 | 24 | 800 | 1 | W-XGA (60Hz) |
| 1280 x 960 | 1.0 | 2.9 | 11.9 | 0.9 | 3 | 36 | 960 | 1 | W-XGA (60Hz) |
| 1280 x 1024 | 1.0 | 2.3 | 11.9 | 0.4 | 3 | 38 | 1024 | 1 | SXGA (60Hz) |
| 1280 x 1024 | 1.1 | 1.8 | 9.5 | 0.1 | 3 | 38 | 1024 | 1 | SXGA (75Hz) |
| 1280 x 1024 | 1.0 | 1.4 | 8.1 | 0.4 | 3 | 44 | 1024 | 1 | SXGA (85Hz) |
| 1400 x 1050 | 1.2 | 2.0 | 11.4 | 0.7 | 3 | 33 | 1050 | 1 | SXGA+ (60Hz) |
| 1440 x 900 | 1.4 | 2.2 | 13.5 | 0.8 | 6 | 25 | 900 | 3 | WXGA+ (60Hz) |
| 1600 x 1200 | 1.2 | 1.9 | 9.9 | 0.4 | 3 | 46 | 1200 | 1 | UXGA (60Hz) |

Connection to the ports

NOTICE ► Use the cables with straight plugs, not L-shaped ones, as the input ports of the projector are recessed.



ⒶCOMPUTER IN1, ⒷCOMPUTER IN2/MONITOR OUT

D-sub 15pin mini shrink jack

<Computer signal>

- Video signal: RGB separate, Analog, 0.7Vp-p, 75Ω terminated (positive)
- H/V. sync. signal: TTL level (positive/negative)
- Composite sync. signal: TTL level

<Component video signal>

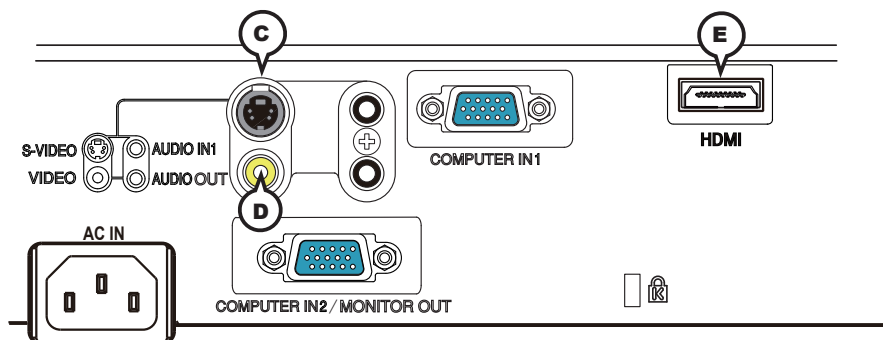
- Video signal:
 - Y, Analog, 1.0±0.1Vp-p with composite sync, 75Ω terminated
 - Cb/Pb, Analog, 0.7±0.1Vp-p, 75Ω terminated
 - Cr/Pr, Analog, 0.7±0.1Vp-p 75Ω terminated



System: 480i@60, 480p@60, 576i@50, 576p@50, 720p@50/60, 1080i@50/60, 1080p@50/60

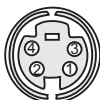
| Pin | Signal | Pin | Signal |
|-----|---------------------------|-----|---|
| 1 | Video Red, Cr/Pr | 9 | (No connection) |
| 2 | Video Green, Y | 10 | Ground |
| 3 | Video Blue, Cb/Pb | 11 | (No connection) |
| 4 | (No connection) | 12 | Ⓐ: SDA (DDC data), (No connection) Ⓑ: (No connection) |
| 5 | Ground | 13 | H. sync / Composite sync., (No connection) |
| 6 | Ground Red, Ground Cr/Pr | 14 | V. sync., (No connection) |
| 7 | Ground Green, Ground Y | 15 | Ⓐ: SCL (DDC clock), (No connection) Ⓑ: (No connection) |
| 8 | Ground Blue, Ground Cb/Pb | | |

Connection to the ports (continued)



ⒸS-VIDEO

Mini DIN 4pin jack



- System: NTSC, PAL, SECAM, PAL-M, PAL-N, NTSC4.43, PAL (60Hz)

| Pin | Signal |
|-----|--|
| 1 | Color signal 0.286Vp-p (NTSC, burst), 75Ω terminator Color signal 0.300Vp-p (PAL/SECAM, burst) 75Ω terminator |
| 2 | Brightness signal, 1.0Vp-p, 75Ω terminator |
| 3 | Ground |
| 4 | Ground |

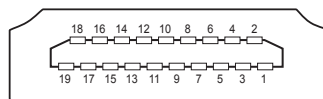
ⒹVIDEO

RCA jack

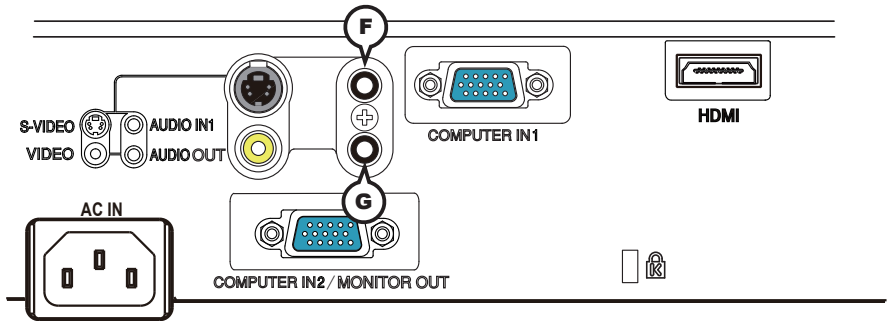
- System: NTSC, PAL, SECAM, PAL-M, PAL-N, NTSC4.43, PAL (60Hz)
- 1.0 ± 0.1 Vp-p, 75Ω terminator

ⒺHDMI

- Type :HDMI™ connector
- Audio signal : Linear PCM (Sampling rate; 32/44.1/48 kHz)



| Pin | Signal | Pin | Signal | Pin | Signal |
|-----|-----------------------|-----|--------------------------|-----|-----------------|
| 1 | T.M.D.S. Data2 + | 8 | T.M.D.S. Data0 Shield | 15 | SCL |
| 2 | T.M.D.S. Data2 Shield | 9 | T.M.D.S. Data0 - | 16 | SDA |
| 3 | T.M.D.S. Data2 - | 10 | T.M.D.S. Clock + | 17 | DDC/CEC Ground |
| 4 | T.M.D.S. Data1 + | 11 | T.M.D.S. Clock Shield | 18 | +5V Power |
| 5 | T.M.D.S. Data1 Shield | 12 | T.M.D.S. Clock - | 19 | Hot Plug Detect |
| 6 | T.M.D.S. Data1 - | 13 | CEC | | |
| 7 | T.M.D.S. Data0 + | 14 | Reserved(N.C. on device) | | |



F AUDIO IN1

Ø3.5 stereo mini jack

- 200 mVrms 47kΩ terminator

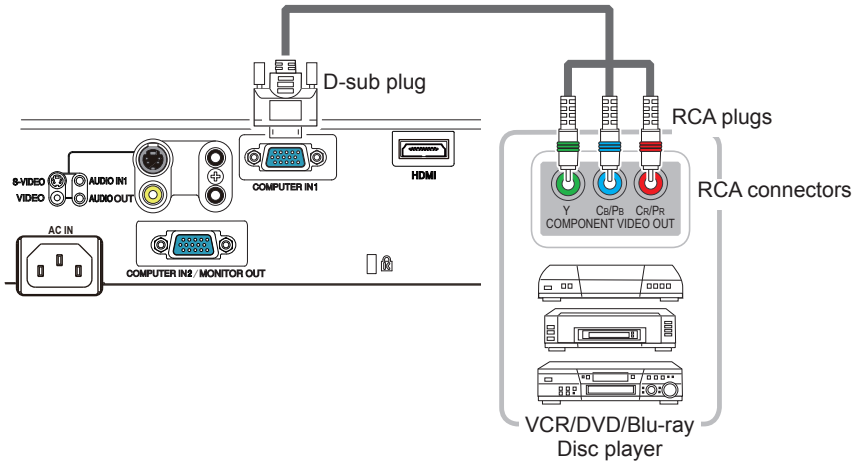
G AUDIO OUT

Ø3.5 stereo mini jack

- 200 mVrms 1kΩ output impedance

To input component video signal to **COMPUTER IN** ports

ex.



To input component video signal to the **COMPUTER IN1** or **COMPUTER IN2** port of the projector, use a RCA to D-sub cable or adapter.

For about the pin description of the required cable or adapter, refer to the descriptions about **COMPUTER IN1** or **COMPUTER IN2** port ([book icon](#)3).